



OFFICE ERGONOMICS

Workers Comp Fund

ERGONOMICS

- Ergonomics is the science of fitting the workplace to the worker, not the worker to the workplace.



Good



Not Good At All

MUSCULOSKELETAL DISORDERS (MSDs)

- Ergonomic injuries are currently referred to as Musculoskeletal Disorders or MSDs. It is a group of injuries and illnesses that affect the musculoskeletal system, there is no single diagnosis for an MSDs.



SIGNS AND SYMPTOMS

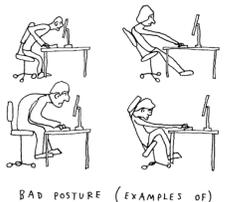
- Computer users experiencing MSDs signs and symptoms notice some of the following:
- Numbness or a burning sensation in the hands
- Reduced grip strength in the hand
- Swelling or stiffness in the joints
- Pain in wrists, forearms, elbow, neck, or back
- Dry, itchy, or sore eyes
- Blurred or double vision
- Aching or tingling
- Cramping
- Loss of color in affected regions
- Weakness

CONTRIBUTING CONDITIONS

- Not all MSDs are related to work activities. Other factors such as personal characteristics and societal factors have also been associated with ergonomic related injuries and illnesses. When analyzing jobs that may be associated with MSDs, conditions to consider may include:

Awkward Postures

- Working in awkward postures can irritate or strain the bone – tendon – muscle connections.



The Lean

No back support and contact pressure



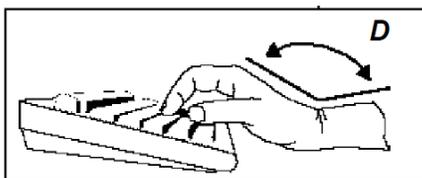
The Reach

Keep items within a close range.



The Hunch

Monitor should be at the appropriate height and distance. Is he wearing the correct eye wear?



Extension

Elevate wrist to provide neutral posture.



The Wing

Adjust chair height to allow for neutral positioning of the shoulder, upper arm, and elbow.



Lap top

When used for an extended period of time, they should always be connected to a docking station.

Repetition

- When motions are isolated and repeated frequently for prolonged periods, there may be inadequate time for your muscles and tendons to recover. Combining repetitive tasks with factors such as awkward postures and force may increase the risk of injury.



Contact Stress

- Contact stress occurs when part of your body rubs against or rests upon a component of the workstation, such as the edge of the desk.



Writing or non-computer tasks

Bring the work to you. Drafting table.



The Phone

Phone rest or head set should be used to eliminate the extremely poor posture of the neck and shoulder while on the phone.



Bad Habits

Provide training and guidance from the first day of work.



Force

- Computer work seldom requires strenuous exertion, but there are tasks that require concentrated force that can affect smaller, localized muscle groups.



POSSIBLE SOLUTIONS

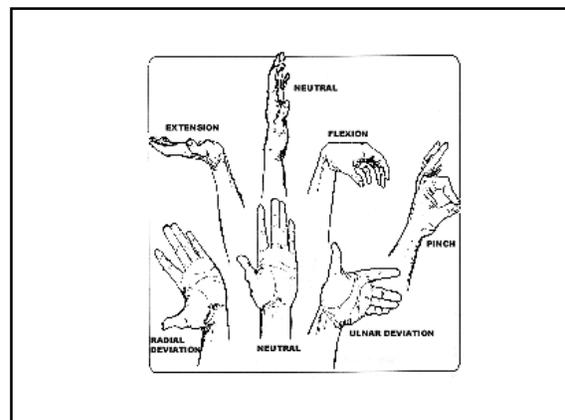
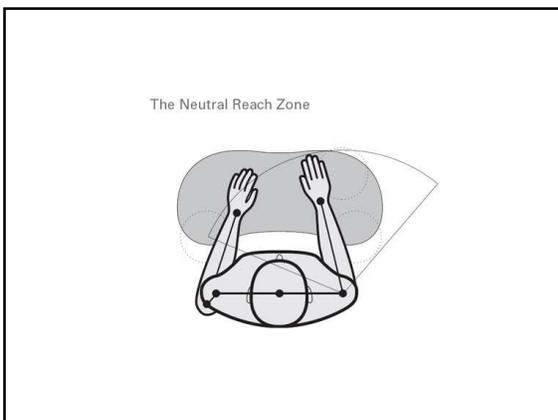
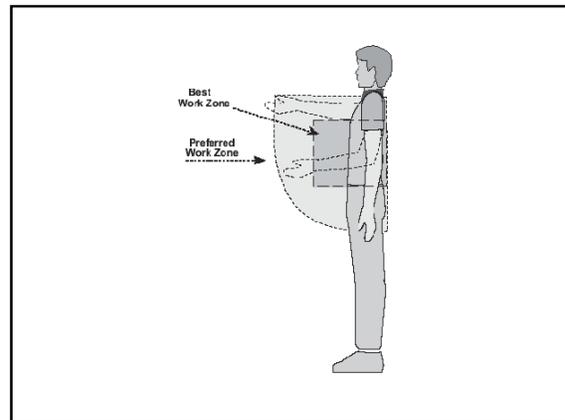
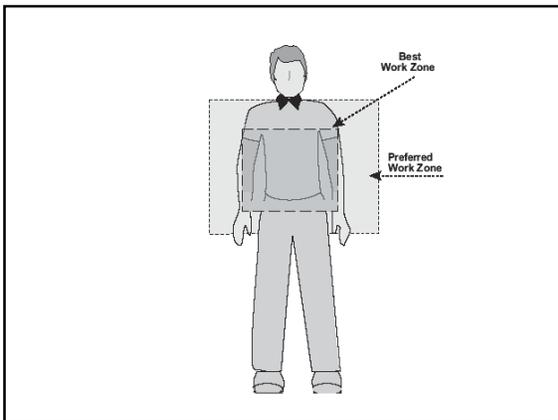
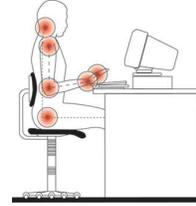


- **Posture**
 - A properly adjusted workstation can help minimize awkward postures.
- **Repetition**
 - Maintain good posture by providing adequate adjustability at the workstation.
- **Contact Stress**
 - Make adjustments to the workstation to reduce or eliminate constant contact.
- **Force**
 - Properly arrange computer components on the work surface to maintain neutral postures and provide adjustable furniture to minimize the amount of time spent in one posture.

Good Working Positions

- To understand the best way to set up a computer workstation, it is helpful to understand the concept of neutral body positioning. This is a comfortable working posture in which the joints are naturally aligned. Working with the body in a neutral position reduces stress and strain on the muscles, tendons, and skeletal system and reduces your risk of developing a musculoskeletal disorder.

Neutral Positions



Office Ergonomics

Ideal

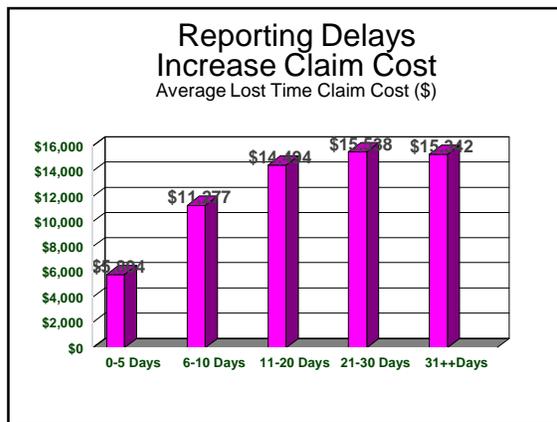
Sitting "ideally" can cause pain after a while. Make minor adjustments frequently and get up and move.

Other Solutions

- Task rotation
- Micro breaks
- Keep fit

REPORTING

- **Early reporting** – It is important to notify a supervisor when an ergonomic related concern arises. Failing to recognize and address signs and symptoms of MSDs early on could allow small problems to develop into serious injuries.



Ergonomic Evaluations

- New Employees
- Discomfort
- Injury
- You notice awkward postures
- As needed, new equipment

Make Adjustments

- Use an evaluation form
- Adjust the chair away from the desk
- Determine if you can change the height of the desk, need a foot rest, keyboard tray, or no change.
- Relocate?
- Monitor, keyboard, mouse phone, lighting
- Sit in their seat
- Don't promise equipment, try to make due
- People are often sensitive during this process

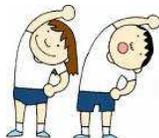


Regular Stretching

- The primary reason athletes warm up are to improve performance and avoid injury
- Reduces muscle tension and stress
- Permits easier movement
- Increases joint range of motion and lubrication
- Decreases the risk of a cumulative trauma

Correct Stretching

- Relaxed, slow and frequent
- No bouncing or stretching to the point of pain
- Hold for 3-5 relaxing breaths
- Do both sides



Stretching the Hands & Forearms

1. With hand open and facing down, gently pull your fingers to side, and then to middle. Hold for 5 to 10 seconds. Repeat 3 times.
2. Start by stretching your arm and hand flat and slowly make the wrist up and down. You feel a stretch. Hold for 3 to 5 seconds. Repeat 3 times. Make the palm up and you feel a stretch. Repeat 3 times.
3. Grasp hand and hold fingers with the other hand. Slowly bend wrist down until you feel a stretch. Repeat 3 to 5 seconds. Repeat 3 times. Then slowly bend your wrist up and you feel the stretch. Hold 5-10 seconds.
4. Sit on the floor with your arms on the floor and palm together. Slowly pull your elbows full wrist outward to side. Be sure to keep your palms together throughout the stretch. Hold 5 to 10 seconds. Repeat 3 times.
5. a) Start with your hand open. b) Make a fist. Keep your thumb straight, not tucked under your fingers.
6. Slide your finger tips up your palm so the tips of your fingers are near the base of the fingers and you should feel a stretch. Do not force your fingers with your other hand if something is uncomfortable.

Stretching the Neck & Shoulders

1. **Shoulder Straps:**
Purpose: To relieve aching symptoms or symptoms or tension in the shoulder and neck area.
• Raise the top of your shoulders toward your ears until you feel slight tension in your neck and shoulders. Hold this feeling of tension for 3 to 5 seconds. Then make your shoulders downward into their normal position. Do this 2 or 3 times.
2. **Head Rolls:**
Purpose: To stretch your chest, neck and shoulder muscles.
• Sit or stand upright. Without tilting your chin, glide your head straight back. You know you are doing this exercise right if it gives you the feeling of a double chin. Hold for 20 counts and repeat 5 to 10 times.
3. **Neck Release:**
Purpose: Helps to relax the neck.
• Sit or stand with a straight back. When As you exhale, drop your head slowly to the left shoulder. Repeat on right. Bring head back to center.
• Inhale, then exhale slowly and drop chin to chest, lowering your right ear toward your right shoulder, exhale while bringing chin back toward chest. Repeat to the left.
4. **Shoulder Roll:**
Purpose: To relax the shoulder muscles.
• Inhale, slowly raise your shoulders to over your ears and roll them backward 90 in a circular motion. After 2 or 3 motions, change direction and roll shoulders forward. Ensure you are breathing deeply each time.

Office Equipment

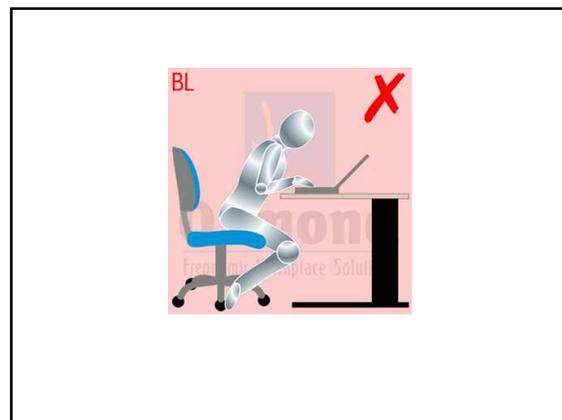
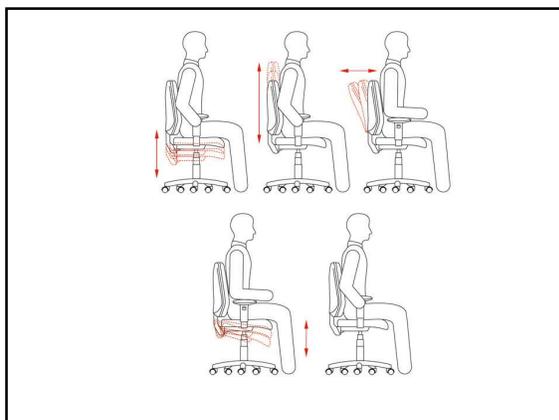
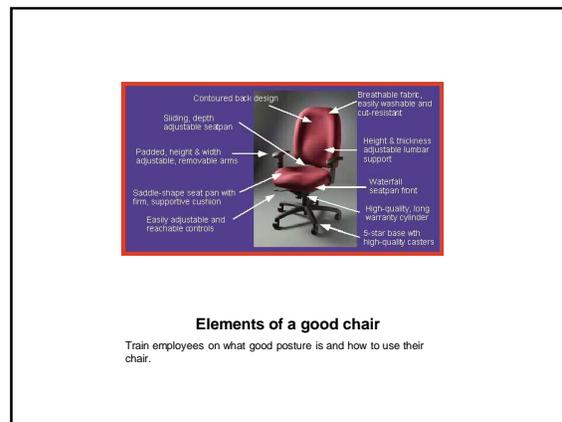
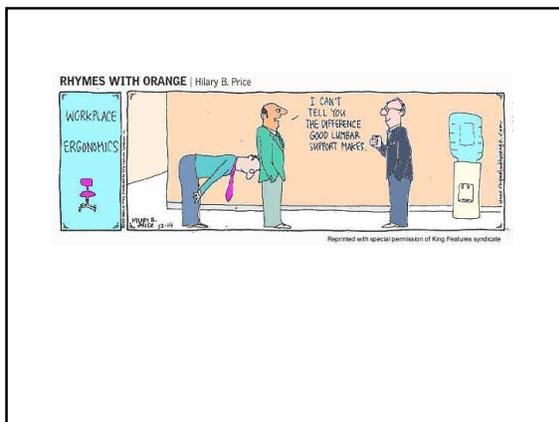


Questions to ask before you buy a product

- There is no such thing as an ergonomic product – it is all in how you use things.
Tony Biafore, Ergonomics
- Why are you buying this?
 - One person
 - Injury
 - Height, weight
 - Whole office
- Can you “test drive” the product?

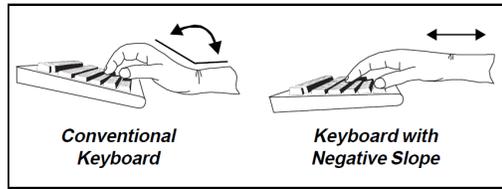
Questions to ask before you buy a product

- Who are you buying this for?
 - One user or multiple users
 - Length of computer work
- Where will it be used?
 - Conference room
 - Shop
 - Executive
- Shop around, look for new products



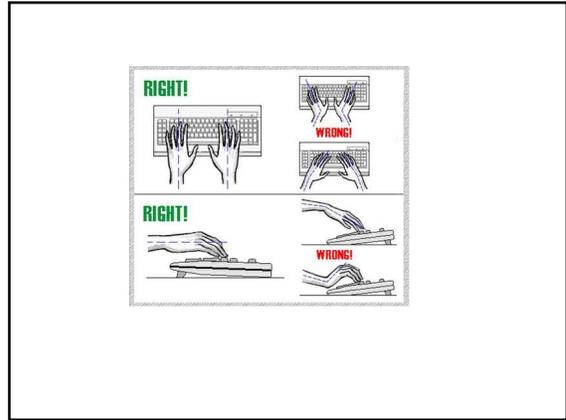
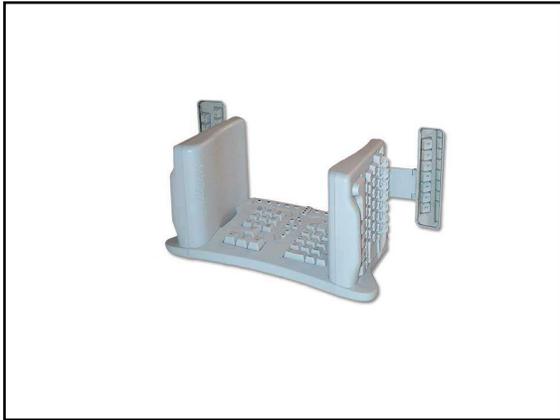


Docking Station



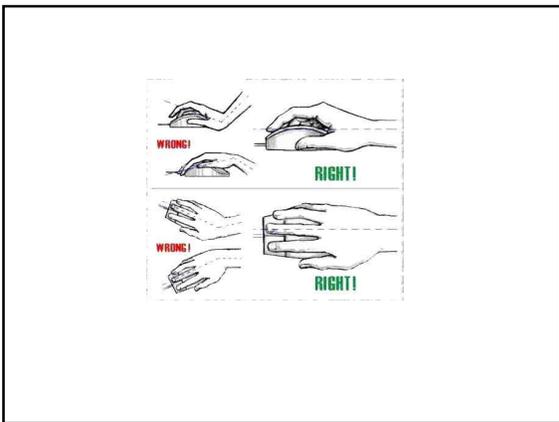
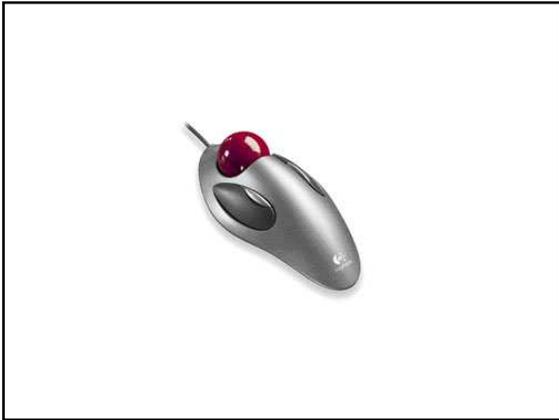
Keyboards





Mouse
Cordless is more adjustable







Monitor Platforms





Keyboard Tray
Is the tray large enough to hold the keyboard and/or mouse?
Location?

A black keyboard tray with a mouse attached. The tray is rectangular and has a small mouse pad area on the right side. It is shown from a slightly elevated angle, highlighting its depth and the placement of the mouse.

Determine if employee should be set up on straight surface or corner. Remove leg obstacles.

A white L-shaped desk with a black keyboard tray. The desk is L-shaped and has a white finish. The keyboard tray is black and is placed on the desk. The desk is shown in a room with a concrete floor and a wall in the background.

First choice is to adjust the working surface to allow employee to keep feet on the ground.

A white adjustable desk with a dark wood top. The desk has a white metal frame with two vertical posts and a horizontal crossbar. The top is a dark wood surface. The desk is shown from a side angle, highlighting its adjustability.

Foot Rest
Use when the work surface cannot be adjusted sufficiently. Do they need more than one?

A black and white foot rest. The foot rest is black with a white border and a white base. It is shown from a slightly elevated angle, highlighting its shape and the placement of the foot rest.



Lighting

Adequate lighting, glare, windows



Floor Mats

Ensure this is positioned correctly (size) to prevent employee from falling off the edges.



Forearm Rest



Clutter under the desk

<http://www.osha.gov/SLTC/ergonomics/index.html>

Office Safety





Housekeeping



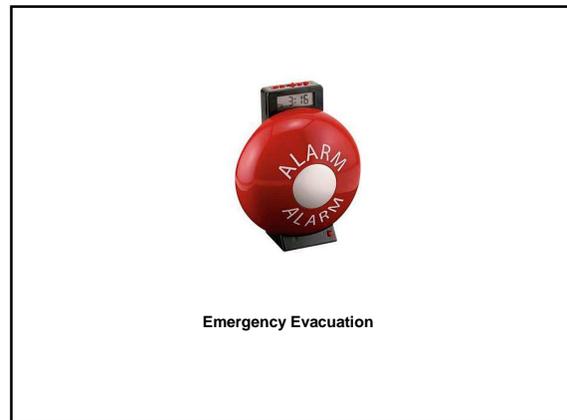
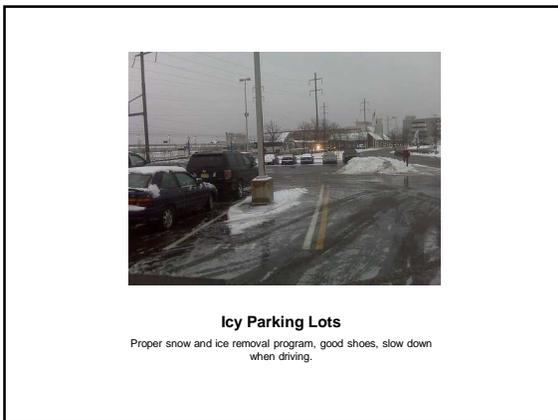
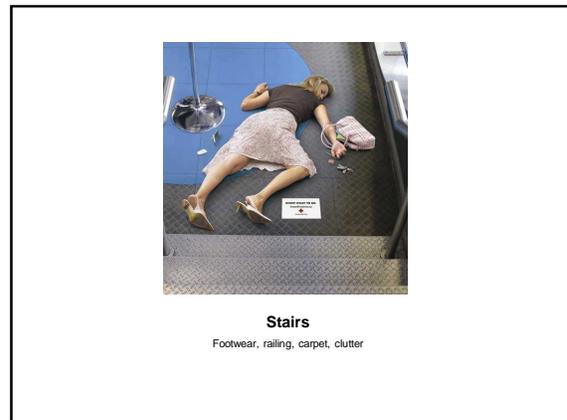
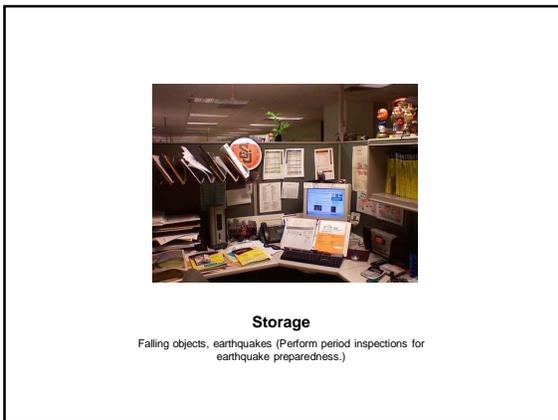
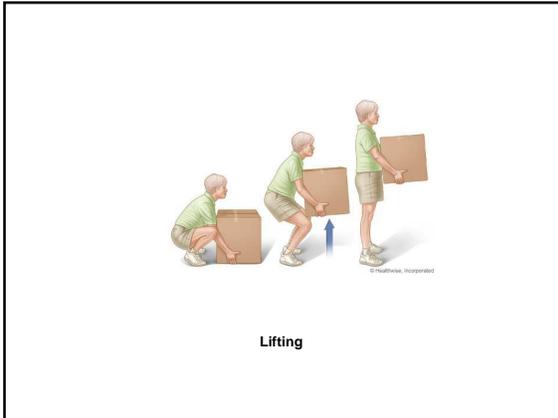
Machines and Equipment



Slip/fall in break rooms and bathrooms



Electrical Hazards



What's so bad about this?



